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AF/1733

MS APPEAL BRIEF - PATENTS
PATENT
0033-0693P

IN THE U.S. PATENT AND TRADEMARK OFFICE

In re application of

Before the Board of Appeals

Yoichi MIZUNO

Appeal No.:

Appl. No.: 09/784,041

Group: 1733

Filed: February 16, 2001

Examiner: J. R. FISCHER

Conf.: 2528

For: CHAFER RUBBER COMPOSITION, AND HEAVY DUTY
PNEUMATIC TIRE USING THE CHAFER RUBBER
COMPOSITION

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APPEAL BRIEF TRANSMITTAL FORM

MS APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 14, 2004

Sir:

Transmitted herewith is an Appeal Brief (in triplicate) on behalf of the Appellants in connection with the above-identified application.

☐ The enclosed document is being transmitted via the Certificate of Mailing provisions of 37 C.F.R. § 1.8.

A Notice of Appeal was filed on November 20, 2003.

☐ Applicant claims small entity status in accordance with 37 C.F.R. § 1.27

The fee has been calculated as shown below:

☐ Extension of time fee pursuant to 37 C.F.R. §§ 1.17 and 1.136(a) - \$0.00.

☒ Fee for filing an Appeal Brief - \$330.00 (large entity).

☒ Check(s) in the amount of \$330.00 is(are) attached.

☐ Please charge Deposit Account No. 02-2448 in the amount of \$0.00. A triplicate copy of this sheet is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

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Attachment(s)

(Rev. 11/04/03)



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APPEAL BRIEF

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

January 14, 2004

Sir:

Pursuant to the Notice of Appeal filed on November 20, 2003, the following Appeal Brief is respectfully submitted in connection with the above-identified application in response to the final rejection of claim 2 dated June 20, 2003.

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I. Real Party in Interest

The real party in interest is Sumitomo Rubber Industries, Ltd., assignee of all right and title in the claimed invention. The assignment of said right and interest was recorded on February 16, 2001, at Reel 011559, Frame 0082 to Sumitomo Rubber Industries, Ltd.

II. Related Appeals and Interferences

There are no related appeals or interferences pending for the present application.

III. Status of Claims

Claim 2 remains pending in the present application.

Claim 1 was canceled without prejudice or disclaimer of the subject matter contained therein in the Amendment filed on August 13, 2002. Claim 3 was canceled without prejudice or disclaimer of the subject matter contained therein in the Reply After Final filed on September 22, 2003.

Claim 2 was rejected under 35 U.S.C. § 103(a), in the final Office Action of June 20, 2003, as being unpatentable over Muraoka et al. (U.S. Patent No. 5,859,142, newly cited; hereinafter "Muraoka '142") in view of Majumdar et al. (U.S. Patent No. 5,503,940; hereinafter "Majumdar '940"), Matsue et al. (U.S. Patent No. 5,420,193, newly cited; hereinafter "Matsue '193") and Carter (U.S.

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Patent No. 5,807,918; hereinafter "Carter '918"). The rejection concerning claim 2 is appealed.

IV. Status of Amendments

The Office Action finally rejected claim 2 is dated June 20, 2003. All amendments filed subsequent to the final rejection as filed by Appellant have been acknowledged by the USPTO and have been entered of record. Specifically, the Office Action of June 20, 2003 is in response to Appellant's amendment of January 31, 2003; the Office Action of October 15, 2002 is in response to Appellant's amendment of August 13, 2002; and the Office Action of May 13, 2002 was the first Office Action for the present application.

In response to the final Office Action of June 20, 2003, Appellant filed a Reply After Final Under 37 C.F.R. § 1.116 on September 22, 2003. The Advisory Action dated October 1, 2003, indicates that the amendments presented in the Reply After Final would be entered for purposes of Appeal (Box 7 on the PTOL-303 form). Claim 2 as entered for purposes of appeal is reflected in the Appendix (attached at the end of this Appeal Brief).

V. Summary of Invention

The present invention is directed to a heavy duty pneumatic tire comprising a chafer rubber composition in the bead portion (see claim

2, the present specification at page 2, lines 20-26 and page 3, lines 5-7, and Figure 1 which shows a cross-sectional view of a bead portion of a tire that is mounted on a rim for a heavy-duty vehicle). In this chafer rubber composition, 55-75 parts by weight of carbon black (having a nitrogen adsorption specific surface area of 70-120 m²/g) and 0.2-0.5 parts by weight of 1,3-bis(citraconimidomethyl)benzene are blended with 100 parts by weight of a rubber component (see claim 2; page 2, lines 27-33 of the specification). The 100 parts by weight of a rubber component contains 30-50 parts by weight of natural rubber and/or polyisoprene rubber and 50-70 parts by weight of polybutadiene rubber (see claim 2; page 2, lines 27-33). The polybutadiene rubber has a syndiotactic crystal content of at least 5% by weight (see claim 2; page 3, lines 31-33; page 4, lines 6-7). Also in the chafer rubber composition, the ratio S/A of a blended amount of sulfur S and a blended amount of vulcanization accelerator A is in a range between 0.25 and 0.5 (see claim 2; page 3, lines 1-4).

VI. Issues Presented

Whether or not claim 2 is patentable under 35 U.S.C. §103(a) over the combination of Muraoka '142, Majumdar '940, Matsue '193 and Carter '918.

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VII. Grouping of Claims

As only one claim is on appeal, no claim groupings exist for purposes of this appeal.

VIII. Argument

Appellant contends that claim 2 is patentable under 35 U.S.C. §103(a) over the combination of Muraoka '142, Majumdar '940, Matsue '193 and Carter '918.

Specifically, claim 2 is patentable over the cited combination of Muraoka '142 in view of Majumdar '940, Matsue '193 and Carter '918, because the cited references have been improperly combined. More specifically, a person having ordinary skill in the art at the time of filing the present application, and upon reading the cited references, would not be motivated or reasonably expect to be successful in combining the cited references in order to achieve the present invention. Further, the present invention has achieved unexpected results, which rebuts any asserted *prima facie* case of obviousness.

Claim 2 reads as follows:

Claim 2. A heavy duty pneumatic tire, wherein said heavy duty pneumatic tire employs in its bead portion a chafer rubber composition,

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wherein in said chafer rubber composition 55-75 parts by weight of carbon black having a nitrogen adsorption specific surface area of 70-120 m²/g and 0.2-0.5 parts by weight of 1, 3-bis (citraconimidomethyl) benzene are blended with respect to 100 parts by weight of a rubber component including 30-50 parts by weight of natural rubber and/or polyisoprene rubber and 50-70 parts by weight of polybutadiene rubber which has a syndiotactic crystal content of at least 5% by weight, wherein a ratio S/A of a blended amount of sulfur S and a blended amount of vulcanization accelerator A is in a range between 0.25 and 0.5.

With respect to the rejection under 35 U.S.C. §103(a), U.S. case law squarely holds that a proper obviousness inquiry requires consideration of three factors: (1) the prior art reference (or references when combined) must teach or suggest all the claim limitations; (2) whether or not the prior art would have taught, motivated, or suggested to those of ordinary skill in the art that they should make the claimed invention (or practice the invention in case of a claimed method or process); and (3) whether the prior art establishes that in making the claimed invention (or practicing the invention in case of a claimed method or process), there would have been a reasonable expectation of success. See *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); see also *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1599 (Fed. Cir.

1988). In summary, Appellant respectfully submits that there is a lack of suggestion in the cited prior art of the desirability of combining these references. Thus, not all requirements for a *prima facie* case of obviousness have been satisfied based on the cited combination of references, and thus the cited references have been improperly combined.

Appellant first describes the deficiencies of the primary reference of Muraoka '142. The cited primary reference of Muraoka '142 is used to disclose certain features of the present invention (the Final Office Action of June 20, 2003 refers Appellant to Column 2, lines 33-60 and Column 4, lines 4-50 of Muraoka '142), but this reference is deficient in several respects (as also stated by Appellant at page 4 of the "REPLY AFTER FINAL UNDER 37 C.F.R. §1.116", filed September 22, 2003). The June 20th Office Action (at paragraph 2, page 2) even admits that Muraoka '142 fails to disclose the inclusion of 1,3-bis(citraconimidomethyl)benzene or BCl in amount between 0.2 and 0.5 phr, and the nitrogen adsorption specific surface area of 70-120 m²/g for carbon black. Thus, Muraoka '142 fails to disclose the following claimed features:

- (i) the claimed 1,3-bis (citraconimidomethyl) benzene component;
- (ii) using the claimed amount of 0.2-0.5 parts by weight of the 1,3-bis (citraconimidomethyl) benzene;

- (iii) the claimed feature of blending (e.g., the claimed components with 1,3-bis (citraconimidomethyl) benzene); and
- (iv) the claimed nitrogen adsorption specific surface area of 70-120 m²/g for the carbon black component.

In the same June 20th Office Action, the other cited references of Majumdar '940, Matsue '193 and Carter '918 are used to account for the deficiencies of the primary reference of Muraoka '142. However, Appellant respectfully submits that these cited references have been improperly combined since there is no particular disclosure and guidance in Muraoka '142 for one of ordinary skill in the art to refer to the other cited secondary references.

No Clear and Particular Guidance in the Primary Reference and the Application of *In re Dembiczak*

One of ordinary skill in the art would not be motivated or reasonably expect to be successful in combining Muraoka '142 with any one of, or all of, the other cited references of Majumdar '940, Matsue '193 and Carter '918, since Muraoka '142 fails to disclose any use of 1,3-bis(citraconimidomethyl) benzene, or using 0.2-0.5 parts by weight of 1, 3-bis (citraconimidomethyl) benzene.

U.S. case law states that while a reference need not expressly teach that the disclosure contained therein should be combined with another, see *Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d

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1461, 1472, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997), the showing of combining references "must be clear and particular". See *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Further, an analysis under 35 U.S.C. §103(a) requires a determination of the scope and content of the prior art, *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

Here, there is no clear and particular guidance in the primary reference of Muraoka '142 to achieve the chemical formulations as presently claimed (as also stated by Appellant at page 5 of the "REPLY AFTER FINAL UNDER 37 C.F.R. § 1.116", filed September 22, 2003). Instead, this primary reference puts a person of ordinary skill in the art in possession of a rubber composition having certain features, but such rubber compositions will have absolutely no (i) 1,3-bis (citraconimidomethyl) benzene, (ii) a certain amount thereof, (iii) a blending of 1,3-bis (citraconimidomethyl) benzene with carbon black and a rubber component, and/or (iv) carbon black having a nitrogen adsorption specific surface area of 70-120 m²/g. Under *Dembiczak*, any combination with the other cited references of Majumdar '940, Matsue '193 and Carter '918 would be improper since there is no clear and particular guidance in the primary reference of Muraoka '142 to refer to the disclosure of these other references. For instance, there is no description in Muroaka '142 of using a cushion material or

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solventless elastomeric adhesive composition, such as that described in Majumdar '940 (see Column 1, lines 20-24 of Majumdar '940). Instead, Muraoka '142 merely describes that its composition "may contain other additives for rubbers generally used in the production of tires". However, this general conclusion cannot be a basis for specifically referring to the cushion material of Majumdar '940. If this disclosure can be used to refer to Majumdar '940, then any reference having an additive of any art can be used in combination with Muraoka '142. Thus, without the required guidance, this rejection under 35 U.S.C. § 103(a) is improper, and Appellant respectfully requests reversal thereof.

Appellant further submits that even if the cited references relied upon disclose all features of the present invention, there still has to be some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300, 1301 (Bd. Pat. App. & Inter. 1993); see also *In re Kotzab*, 217 F.3d at 1301, 55 USPQ2d at 1318. Appellant submits that it is not sound and scientific reasoning for one of ordinary skill in the art, upon reading Muraoka '142, to refer to Majumdar '940 when Muraoka '142 merely describes only some components as instantly claimed without any further guidance.

Further, in determining the scope and content of the prior art as required by *Graham v. John Deere Co.*, an evaluation of the claimed

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subject matter as a whole in the light of the differences between claim 2 of the present invention and the cited prior art of Muroaka '142 reveals that Muraoka '142 is limited in scope of its disclosure of the present invention. Specifically, there is no disclosure or recognition of the features (i)-(iv) mentioned above in the primary reference of Muraoka '142. Thus, the instant rejection under 35 U.S.C. § 103(a) is improper, and Appellant respectfully requests the Board to reverse this rejection.

The Asserted Rationale in the Office Action Equals An Invitation to Experiment to Achieve the Present Invention

In contrast to Appellant's assertion that the requisite motivation and reasonable expectation of success are lacking in the instant situation, the Examiner states that the references could be combined to attain the benefits of improved blowout resistance, reduction in heat generation, etc., as disclosed at Column 2, lines 27-54 and Column 3, lines 13-21 of Majumdar '940 (see the paragraph bridging pages 2-3 of the June 20th Office Action). Although the USPTO asserts that the requisite motivation lies in Majumdar '940, Appellant respectfully traverses such conclusions and the asserted combination of references.

Appellant respectfully submits that using the Examiner's rationale and conclusions for combining the cited references (i.e.,

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reduce heat generation; etc.) are improper since Majumdar '940 could be combined with any number of references of any type. As stated by Appellant during prosecution, using the USPTO's reasoning with regard to Majumdar '940 equals an invitation to experiment until the present invention is finally achieved, which is improper for an analysis of patentability under § 103(a) (as stated by Appellant at pages 5-6 of the "REPLY AFTER FINAL UNDER 37 C.F.R. § 1.116", filed September 22, 2003). See *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1599 (CAFC 1988) (In *In re Fine*, the CAFC reversed the BPAI by stating: "The Board reiterated the Examiner's bald assertion that "substitution of one type of detector for another in the system of Eads would have been within the skill of the art," but neither of them offered any support for or explanation of this conclusion.") (emphasis added); see also *In re Deuel*, 51 F.3d 1552, 1559, 34 USPQ2d 1210, 1216 (Fed. Cir. 1995) (where the court states: "Obvious to try" has long been held not to constitute obviousness. A general incentive does not make obvious a particular result, nor does the existence of techniques by which those efforts can be carried out") (citing *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1680-1681 (Fed. Cir. 1988)).

Here, nothing in Majumdar '940 is needed to specifically refer to the rubber composition of the primary reference of Muraoka '142 with this reasoning, and that using the USPTO's conclusions for

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combining the cited references are improper since Majumdar '940 could be combined with any number of references of any type. Using the rationale of improving blowout resistance, etc., means Majumdar '940 could be combined with any other reference of any field of endeavor, without any requirement to refer to the elastomeric adhesive composition of Muroaka '142. All that is needed is for Majumdar '940 to describe its advantages (i.e., improved blowout resistance) without accounting for the deficiencies of itself and the other cited references. Appellant respectfully submits that a reading of the advantages as stated in Majumdar '940 is the major reason for combining this reference with the other cited references as stated in the Final Office Action (dated June 20, 2003), and is improper.

Thus, a huge number of combinations of references are possible based on the rationale stated in the Final Office Action. One of ordinary skill would recognize that there is only a mere general disclosure in Majumdar '940 that may pique a scientist's curiosity. One of ordinary skill in the art would not refer to Muraoka '142, upon a reading of Majumdar '940, because there is no disclosure in Majumdar '940 of using the combination of components in Muraoka '142, and vice versa. This rationale is nothing more than an invitation to experiment, or an "obvious to try" rationale, as stated in the *Fine* case, until the present invention can be obtained (combining with Muraoka '142, Matsue '193 and Carter '918).

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Further, the cited primary reference is Muroaka '142, and not Majumdar '940. The basis for the instant rejection is for one of ordinary skill in the art to read the primary reference of Muroaka '142, and to then refer to a specific reference(s) in order to achieve the present invention.

Thus, Appellant respectfully submits this rejection is improper requests reversal thereof.

Considering Muroaka '142 In Its Entirety

The June 20th Office Action refers to how the Muroaka '142 reference has problems that are addressed in its disclosure (with reference to Column 1, lines 65-67 of Muraoka '142), which are similar to those problems addressed by the present invention (with reference to Paper No. 9, pages 4-5) (see page 3, lines 10-13 of the Office Action). Further, the Examiner states Muraoka '142 suggests that rubber compositions are required to have high hardness, high durability and high aging resistance (see the Final Office Action at page 3, lines 1-3 from the bottom). However, Appellant respectfully submits that one of ordinary skill in this art would not refer to any other reference (i.e., Majumdar '940), upon a reading of the entirety of Muraoka '142, since this primary reference already discloses the achievements of "well-balanced good" and "superior" properties over

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the comparative examples (i.e., Column 9, lines 1-5; Column 11, lines 13-15).

First, Appellant submits the applicable case law that any cited reference (such as Muraoka '142) used for a rejection under 35 U.S.C. § 103(a) must be considered in its entirety, i.e., as a whole, including those portions that would lead away from a claimed invention. See *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Second, Appellant respectfully submits that upon a reading of the entirety of the Muraoka '142 reference, one of ordinary skill in the art would recognize the described superior and well-balanced good properties in hardness, permanent set and abrasion resistance (see Column 9, lines 1-7; Column 11, lines 13-15), as described in the experimental data section of this patent. In recognition of the sufficient or "high" hardness, durability and aging resistance (see Column 1, lines 57-60; Column 2, lines 5-11), one of ordinary skill in the art would not reasonably expect to be successful in improving upon these superior properties, nor would the skilled artisan be motivated to refer to another reference, since the Muraoka '142 patent already teaches superior properties with its product (as stated by Appellant at page 7 of the "REPLY AFTER FINAL UNDER 37 C.F.R. § 1.116", filed September 22, 2003). Thus, even though Muraoka '142 describes rubber compositions are required to have high

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hardness, high durability and high aging resistance (as also cited and emphasized in the Final Office at page 3), Muroaka '142 itself accounts for the achievements of these desirable properties (which are "well-balanced" and "superior").

Thus, Appellant respectfully submits that any combination of Muroaka '142 with another reference, such as Majumdar '940, Matsue '193 and Carter '918 as cited, is improper. The cited primary reference of Muraoka '142 already discloses the achievements of "well-balanced good" and "superior" properties. Thus, one of ordinary skill in the art would not reasonably expect to be successful in improving upon these superior properties, nor would the skilled artisan be motivated to refer to another reference, since the Muraoka '142 patent already teaches superior properties with its product. Based on the lack of the requisite motivation and reasonable expectation of success necessary to establish a *prima facie* case of obviousness, reversal of this rejection under 35 U.S.C. §103(a) is respectfully requested.

Impermissible Hindsight Reconstruction

Appellant further submits that the present specification is being reviewed and then used to disclose the present invention. However, such referral to the present specification is an improper means of finding the requisite motivation to combine the cited

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references. In this regard, Appellant respectfully submits that to pick and choose these references in order to achieve the present invention can only be accomplished by reading the present specification, review what is being claimed, and then applying substantial hindsight reconstruction by combining reference A with three other references (as stated by Appellant at pages 8-9 of the "AMENDMENT AND REPLY UNDER 37 C.F.R. § 1.111", filed August 13, 2002). However, this reconstruction is contrary to case law when the USPTO has simply chosen elements from cited references after considering the instant disclosure to order to come up with the components as presently claimed (*i.e.*, claim 2 or 3). Appellant is aware that some hindsight is allowable under *In re McLaughlin*, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971). However, Appellant submits that a substantial and improper level of hindsight reconstruction has been applied. Thus, Appellant submits that the USPTO has relied on an impermissible level of hindsight reconstruction as a basis of support of the instant rejection. See *In re Gorman*, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991) (citing *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985).

Accordingly, Appellant submits that has applied substantial hindsight reconstruction by combining the cited references in order

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to achieve the present invention. Therefore, Appellants respectfully requests reversal of the rejection under 35 U.S.C. §103(a).

Improper Combination of References Based on Inconsistent Features

Appellant also asserts that the instant rejection is improper because there are too many inconsistencies between the cited references, and between the cited references and the present invention (as stated by Appellant at pages 6-7 of the "REPLY AFTER FINAL UNDER 37 C.F.R. § 1.116", filed September 22, 2003). The requisite motivation cannot be found based on these inconsistencies. For example, Majumdar '940 is directed to a cushion material for carcass and/or tread portion for retread tire (see Column 1, line 23), whereas the chafer rubber composition of the present invention related to a chafing material disposed in the tire bead portion to fit a tire rim (see the features of Claim 2). As another example of an inconsistency, nothing in Muraoka '142 suggests to one of ordinary skill in the art to use the cushioning material of Muraoka '940. Further, the Majumdar '940 reference discloses an elastomeric adhesive composition having a bis-imide compound, one or more elastomers, and a tackifier (see Column 1, lines 24-49). Yet, Muraoka '142 uses no such materials in its rubber component.

Thus, one of ordinary skill in the art would not refer to the cushion material of Majumdar '940, or the any of the other cited

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references, in order to achieve the present invention due to such inconsistencies. Reconsideration and reversal of this rejection is respectfully requested.

Unexpected Results as a Rebuttal to the Asserted *Prima Facie* Case of Obviousness

Appellant initially submits that that the cited combination of the four references is improper, and that a showing of unexpected results is not necessary to overcome the rejection. Still, Appellant respectfully submits that unexpected results do exist for the present invention, whereby these unexpected results rebuts any asserted *prima facie* case of obviousness based on the cited combination of Muroaka '142, Majumdar '940, Matsue '193 and Carter '918.

The present invention has achieved the unexpected results of improving all three desirable properties of rim-slippage resistance, creep resistance, and toe-cracking resistance. Further, because of the claimed features, the present invention has produced a chafer rubber composition leading to the required strength without degradation in thermostability in a heavy duty pneumatic tire (see Examples 7-11 in Table 3 having certain S/A ratios; see also page 5, lines 17-26). Appellant has also shown that the claimed S/A ratio of 0.25 to 0.5 leads to many desirable characteristics, such as improvements in strength at break, elongation at break, hardness and

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loss tangent, without the chafing or cracking in the tire (see results of Table 3). None of the cited references even disclose advantages such as better Rim-Slippage Resistance, Creep Resistance, and Toe-Cracking Resistance.

The Examiner (at pages 4-5 of the Office Action, dated October 15, 2002 and at pages 5-6 of the Final Office Action, dated June 20, 2003) asserts that such results in the present specification are not commensurate in scope and are not unexpected. However, Appellant traverses the USPTO's position since the Examiner has not taken into account all of the Examples in comparison with all Comparative Examples. Upon a reading of the present specification, one of ordinary skill in the art would understand that the present invention has achieved, for instance, better tensile properties and appearance of the tire after a road test (as shown in the Tables in the present specification).

Appellant also traverses the USPTO's position regarding the unexpected results since a) the Examiner has not indicated what is the closest prior art (*i.e.*, an embodiment in Muroaka '142; a hypothetical embodiment not made by the prior art) for a proper comparison, and b) there is the assumption that all references could hypothetically and properly be combined anyway.

Thus, Appellant respectfully submits that the present invention has achieved unexpected results that rebut the asserted *prima facie*

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case of obviousness. Reversal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

IX. Conclusion

For the reasons advanced above, it is respectfully submitted that claim 2 of the present application is allowable, wherein the present invention is patentably distinct from the cited combination of references, and that these references have been improperly combined. This is because the cited combination of references of Muraoka '142, Majumdar '940, Matsue '193 and Carter '918 at best only generically discloses individual ingredients, without any clear and particular guidance to refer to the disclosure of one another. Further, there is no teaching or disclosure in the primary reference of Muroaka '142 that would motivate one skilled in the art to arrive at such a combination. Appellant even submits that one of ordinary skill in the art would not be motivated or reasonably expect to be successful in improving upon the "well-balanced" and "superior" properties as disclosed in the primary reference of Muraoka '142. There are also too many inconsistent features between the cited references. Thus, substantial hindsight reconstruction has been applied in order to improperly achieve the present invention. Unexpected results also exist for the present invention, which rebuts any asserted *prima facie* case of obviousness.

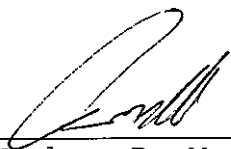
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Accordingly, favorable reconsideration and reversal by the Honorable Board of Patent Appeals and Interferences of the Examiner's rejection under 35 U.S.C. § 103(a) of claim 2 is respectfully solicited. The Final Rejection of the Examiner is without basis, and should be reversed.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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X. APPENDIX: CLAIMS ON APPEAL

Claim 2. A heavy duty pneumatic tire, wherein said heavy duty pneumatic tire employs in its bead portion a chafer rubber composition, wherein in said chafer rubber composition 55-75 parts by weight of carbon black having a nitrogen adsorption specific surface area of 70-120 m²/g and 0.2-0.5 parts by weight of 1, 3-bis (citraconimidomethyl) benzene are blended with respect to 100 parts by weight of a rubber component including 30-50 parts by weight of natural rubber and/or polyisoprene rubber and 50-70 parts by weight of polybutadiene rubber which has a syndiotactic crystal content of at least 5% by weight, wherein a ratio S/A of a blended amount of sulfur S and a blended amount of vulcanization accelerator A is in a range between 0.25 and 0.5.